NOTES AND NEWS.

MESSRS. ELLIS and Everhart write about an interesting Coprinus, in the *Microscope* for May, which forms sclerotia. It was found by Mr. F. W. Anderson in Montana.

ONE HUNDRED new species of North American fungi are described by Messrs. Ellis and Everhart in the Proceedings of the Philadelphia Academy of Sciences for July. They are mostly pyrenomycetous forms.

A REVIEW of the works on lichenography appearing in 1889 is given by M. l'abbé Hue, and a similar notice of papers on vegetable anatomy by M. Leclerc du Sablon in a recent number of the Revue général de Botanique (ii. 404, 412).

HENRY L. BOLLEY, assistant botanist in the Indiana Experiment Station for the last two years, has gone to Fargo to assume charge of the botanical work in the North Dakota University and Experiment Station, recently organized.

HERBERT J. WEBBER, for some time assistant in the botanical department of the University of Nebraska, and author of the Flora of Nebraska recently published, has been appointed assistant in the Shaw School of Botany at St. Louis.

PROF. C. R. BARNES has been entrusted with the revision of Dr. Gray's Field, Forest and Garden Botany. The work will be extended to include the range of States west of the Mississippi, Tennessee and the higher portions of the Southern States. It is expected that the revision will be completed by the close of 1891.

A DESCRIPTIVE account of the Ustilagineæ of Denmark has been published by E. Rostrup in the *Festkrift udgivet af den botaniske Forening* in Copenhagen, 1890 (pp. 117–168). Twelve genera and sixty seven species are given, with four genera and seven species of the closely-related Protomyces group.

AN ADMIRABLE ARTICLE on the domain and condition of vegetable pathology in America, by B. T. Galloway, appeared in the *American Garden* for October. It treats an important subject in a comprehensive and incisive manner, and should be productive of its better understanding by the general public to whom it is addressed.

DR. J. T. ROTHROCK has arranged a biological expedition to the West Indies and Yucatan, to spend the months of November, December and January in those countries. The party is provided with an excellent ship, furnishing abundance of storage room for each, and is limited to eight. Mr. A. S. Hitchcock goes with the company in the interest of the Missouri Botanical Garden.

IN AN ARTICLE on the tannin of Compositæ (Rev. gén. de Bot. ii. 391) M. Lucien Daniel concludes that the greatest quantity of astringent substances is to be found in the leaves; after them in the order of their richness in these substances are the capitula, the stems, and, lastly, the roots. Young roots are less rich in tannin than mature ones, but the reverse is true of stems. The species of Cynarocephalæ are richest in tannin; the Cichoriaceæ are poorest. The tannin does not play the rôle of a reserve food.

THE DUTCH SOCIETY of Sciences at Haarlem invite research on a wide range of subjects, including the following: Methods of obtaining and fixing new varieties in cultivated plants; rôle of bacteria in filtration of potable waters through a layer of sand; bacteria and azotized combinations in the soil; healing after grafting.

THE THIRD annual meeting of the Western Society of Naturalists was held at Purdue University, La Fayette, Ind., November 12 and 13. The president, Dr. Chas. E. Bessey, could not be present, but his address upon the relation of scientific training to general culture was read. The discussions of the meeting were chiefly devoted to the subject of the presidential address, the kind and amount of scientific training to be required for entrance to college, the relation between investigation and instruction, and matters of technique, such as the exhibition or description of apparatus, imbedding, clearing, and staining processes, etc. Prof. C. R. Barnes acted as president, with Dr. J. S. Kingsley as secretary and Prof. Stanley Coulter as treasurer. The next annual meeting will be held at St. Louis, with the following officers: Prof. John M. Coulter, president; Prof. C. W. Hargitt, vice-president; Dr. J. S. Kingsley, secretary; Prof. B. P. Colton, treasurer.

DR. JULIUS WIESNER propounds in the Berichte der deutschen botanischen Gesellschaft (viii. 196) an entirely new theory of the construction and growth of the cell wall. Starting with the premises that within the organism living material arises only from living, or under the direct action of living material, and that there is no other mode of origination (Neubildung) in the organism except division, he argues that it follows as a logical necessity that the protoplasm, which is a very complex structure, can only reproduce itself by division. From this it follows that the living substance of plants (in which he would include the growing cell wall) must consist of minute organized individual particles which have the power to divide, to grow and to assimilate. These simplest elementary organs of the cell he designates *plasomes*. These plasomes are aggregated to form the organs of the cell in very much the same way as cells are aggregated to form tissues. The growth of any part of the cell is dependent on the production of new plasomes by division and on the growth in mass of each plasome, which he refers to the physical laws of diffusion and absorption, and to the subsequent assimilation of the materials so gained. The tensions in the cell are set up during the growth in volume of the cell, just as they are in organs composed of cells, by the unequal growth of certain parts. So, for instance, the tension of the cell wall is due to the collective pressure of the cytoplasm. "As the molecule is the last form-element of the dead substance, so the plasome forms, according to my conception, the last form-element of the organism possessing the attributes of life." Dr. Wiesner promises a more complete exposition of his theory in a future publication.